

***Candida glabrata* and *Candida albicans* single and co-colonization of acrylic in presence of saliva**

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Oral candidosis is a frequent problem in immunocompromised patients and *Candida albicans* is regarded as the leading cause of such infections. However, recently, *Candida glabrata* has emerged as an important pathogen, occurring both singly or in mixed species infections, often with *C. albicans*. Compared with *C. albicans*, few is known about the role of *C. glabrata* in oral infection. Furthermore the use of denture acrylic surfaces is a prerequisite for adhesion and biofilm formation by *Candida* species in oral environment. Thus, the aim of this study was to examine the adhesion and biofilm formation ability by single and mixed *C. glabrata* and *C. albicans* species on acrylic in the presence of artificial saliva.

Adhesion ability was quantified by colony forming units (CFUs) counting using CHROMagar medium and the total biomass quantified by crystal violet. Epifluorescence and confocal microscopy observations were used for examining the biofilm structure using species specific peptide nucleic acid (PNA) probe hybridisation. The results showed that *C. glabrata* had higher ability to adhere and form biofilms on acrylic comparatively to *C. albicans*. Additionally, co-culture studies showed that the presence of *C. albicans* did not affect the ability of *C. glabrata* to adhere to acrylic surface. Microscopy images are in accordance with CFUs and crystal violet staining results.

The importance of recognising the occurrence of infections associated to mixed biofilms is highlighted by the results of this study and represents an area that should be considered by both diagnostic laboratories and clinicians.